

REMARKS

Claims 1-7, 9-11, and 15-20 are pending in the present application. Claims 1-3 and 9-11 were allowed by Examiner. Claim 15 is amended. Claims 4-7 are cancelled.

CLAIM REJECTIONS – 35 U.S.C. § 102

Claims 15-17

Examiner rejected claims 15-17 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 3,633,714 to Klaue. More specifically, Examiner stated:

Re: claims 15 and 16. Klaue shows in the figure 5 (below) a fluid cooled brake housing for a brake system that includes friction pads 9,10 and a rotatable element 13,67,68 to be braked, the brake housing comprising a circumferential wall 51 and two axial end walls one shown to the right of the end of the lead line of 74 and the other shown to the left of the end of the lead line of 53 that define a cavity as shown for housing the friction pads and rotatable element, an opening in the at least one of the axial end walls through which a portion of the rotatable element can extend as shown, a fluid flow path 73,75 formed within the circumferential wall such that the fluid flow path is external to the defined cavity as shown, a fluid inlet 73 in fluid communication with the fluid flow path, a fluid outlet 80 in fluid communication with the fluid flow path, a supply of cooling fluid connected to element 73 in fluid communication with the fluid inlet and the fluid outlet, the cooling fluid flowing from the fluid inlet through the fluid flow path to the fluid outlet thereby cooling the entire brake housing, and a seal means 71 for sealing the opening such that the cavity can be at least partially filled with a volume of lubricating fluid to provide a wet brake housing.

Re: claim 17. Klaue shows in figure 5 (below) the limitation wherein the fluid flow path includes a plurality of parallel channels 75 and 78 extending between the fluid inlet and the fluid outlet.

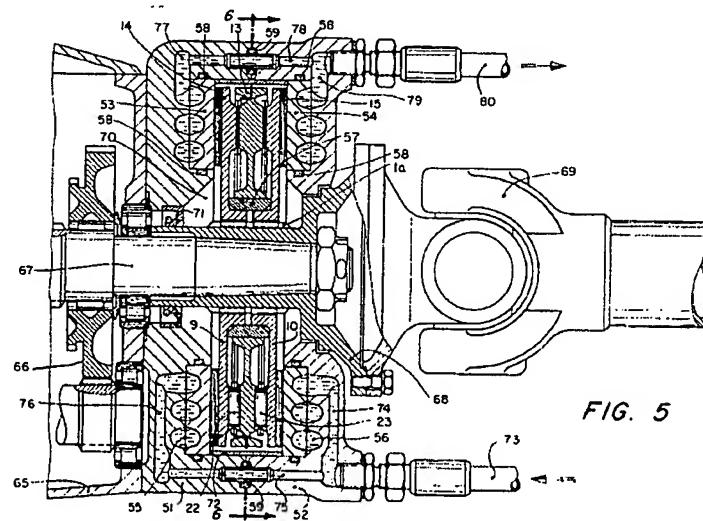


FIG. 5

A prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990).

Independent Claim 15, as amended, is novel in view of the Klaue reference. Klaue does not teach, either expressly or inherently, each and every element as set forth in the claimed invention. Specifically, Klaue fails to teach that the fluid flow path is formed *around the periphery* of the circumferential wall. Instead, Klaue features a fluid flow path that *crosses through* the outer circumferential wall (FIG. 5, refs. 75 and 78) and flows around the end walls (FIG. 5, refs. 55 and 56).

The American Heritage Dictionary defines “around” as being: (1) “on all sides”; (2) “in a circle or with a circular motion”; or (3) “in circumference or perimeter.” Accordingly, Applicant believes that the connecting passages of Klaue (FIG. 5, refs. 75 and 78) do not satisfy this definition and are thus not the equivalent of a fluid flow path formed *around the periphery* of the circumferential wall.

Applicant respectfully asserts that amended Claim 15 is novel despite the cited reference. Moreover, because independent Claim 15 is novel, all claims dependent upon Claim 15 are novel as well. As such, dependent Claims 16-20 are novel over Klaue. Applicant respectfully requests withdrawal of this rejection and allowance of the claims as presented herein.

CLAIM REJECTIONS – 35 U.S.C. § 103

Claims 18-20

Examiner rejected claims 18 and 19 under 35 U.S.C. § 103(a) as being unpatentable over Klaue in view of Pogorzelski et al. (U.S. Patent No. 5,445,242). More specifically, Examiner stated:

Re: claim 19. Klaue is silent with regards to how the cooling fluid is circulated.

Pogorzelski et al. teach in figure 1 a pump 94 for pumping the cooling fluid through the supply and the fluid flow path.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified one of the ends of the fluid inlet of Klaue, to have been connected to a pump, as taught by Pogorzelski et al., in order to provide a means of circulating the cooling fluid through the cooling system in order to effectively prevent overheating of the brake device.

Re: claim 18. Klaue is silent with regards to a heat exchanger being in fluid communication with the supply for cooling the cooling fluid.

Pogorzelski et al. teach in figure 1 a brake device including a heat exchanger 96 in fluid communication with the supply for cooling the cooling fluid.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the cooling system of Klaue to have included a heat exchanger, as taught by Pogorzelski et al., in order to provide a means of controlling heat dissipation within the system.

If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious as well. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Independent Claim 15 is nonobvious in spite of Klaue in view of Pogorzelski, et al. Because Claim 15 is nonobvious, all dependent claims are nonobvious as well. Accordingly, Claims 18 and 19 are nonobvious. Applicant respectfully requests withdrawal of this rejection and allowance of the claims as presented herein.

Claim 20

Examiner rejected claim 20 under 35 U.S.C. § 103(a) as being unpatentable over Klaue in view of US Patent 4,262,789 to Collins. More specifically, Examiner stated:

Klaue describes the invention substantially as set forth above including the limitation of a cooling fluid, but lacks the limitation of the area at area sealed by the sealing member being filled with a volume of lubricating fluid.

Collins teaches in col. 1 lines 39-43 the use of a brake system including a lubricating fluid in addition to a cooling fluid.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the brake system of Klaue to have included a lubricating fluid in addition to the cooling fluid, as taught by Collins, in order to provide a means of effectively lubricating the system rather than using the cooling fluid as both a cooling and lubricating means.

If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious as well. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Independent Claim 15 is nonobvious in spite of Klaue in view of C. Because Claim 15 is nonobvious, all dependent claims are nonobvious as well. Accordingly, Claim 20 is nonobvious. Applicant respectfully requests withdrawal of this rejection and allowance of the claims as presented herein.

CONCLUSION

Applicant believes Claims 15 through 20 are in condition for allowance, and that the amendments herein are similar to allowed Claim 1 and thus require no further examination. It is respectfully urged that the subject application is patentable over references cited by Examiner. Applicant requests reconsideration of the application and allowance of the claims.

If there are any outstanding issues that the Examiner feels may be resolved by way of a telephone conference, Examiner is cordially invited to contact David W. Carstens at 972-367-2001.

The Commissioner is hereby authorized to charge any shortages or credit any overpayments to Deposit Account 50-0392.

Respectfully submitted,

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